

U.S.S.N. 10/072,766

Filed: February 8, 2002

SUBSTITUTE AMENDMENT AND RESPONSE TO OFFICE ACTION

Amendment

In the Specification

Please replace the paragraph bridging pages 3 and 4 with the following paragraph.

Figures 2A-G are diagrams showing introduction of bioactive material using a catheter including a reservoir and control means to access the organ (A), where the catheter is positioned and stabilized (B), the endoluminal zone penetrated (C), stabilized in the endomural zone (D), optionally further including the step of removing tissue, using mechanical, laser, thermal, radiofrequency, ultraviolet, x-ray, electromagnetic, acoustic or chemical means (E), delivering biologically active agents, including ~~pharmacologic~~ pharmacologic agents, cells, or biomaterials (G F), and sealing the zone and access tract (H G).

Please replace the paragraph bridging pages 25 and 26 with the following paragraph.

In a preferred embodiment, a combination of factors and cells are used to induce angiogenesis in the endomural zone or access tract to the zone. Exemplary angiogenic growth factors include fibroblast growth factor (FGF), platelet derived growth factor (PDGF), epidermal growth factor (EGF), vascular endothelial growth factor (VEGF), Midkine chemokines, leptins, angiopoietin, and other growth factors, inflammatory angiogenic polymers or polymer constructs, electroactive or other microinjurious or locally stimulatory polymers. Preferred cells include endothelial cells, EC bone marrow precursor cells, other stem cells smooth muscle cells or precursors, combinations, neural cells or neural stem cells or combinations with above are placed. These are used for example for angiogenesis, myogenesis or myocardial tissue repair in

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which myocytes – precursor, differentiated, homograft, isograft, allograft or xenograft are placed in the myocardium, with or without polymer adducts or matrix protein mixtures, or with neural cells or other adrenergically active or cholinergically active cell types. Means (hard wire or polymer) for electrically driving, pacing, shocking or sensing the neotissue can also be included.